

Blood Alcohol
Concentration
(BAC)

Predictable Effects on the Average Person

.02%

- Relaxation
- Loss of inhibitions
- Mild intensification of existing mood
- Lightheadedness

This is the legal limit for those under the
age of 21 and driving under the influence.

.05%

- Mild euphoria
- Emotions and behavior become exaggerated
- Deficits in fine motor skills
- Delayed reaction time
- Lack of recognition of these deficits

.08%

- Motor skills impaired
- Mild speech impairment
- Balance is affected
- Sight and hearing are reduced
- Impaired judgment such that one's ability to evaluate or respond to sexual situations is impaired
- Recognition of cognitive motor deficits is lost

This is the legal limit for those over the age of 21 while driving.

.10%

- Lack of coordination and balance
- Memory and judgment are severely impaired
- Recognition of impairment is lost
- Emotions are exaggerated to the extreme point of belligerence in some cases

.15%

- Significant impairment of all mental and physical functions with deficits in judgment
- Feeling as if one is in a stupor
- Blackouts (drug induced amnesia)
- Risk of accidental injury to self and others
- Significant loss of control over behavior

.20%

- Confusion
- Standing upright is difficult
- Movement requires assistance from others
- Physical harm to self often goes unnoticed or is ignored
- Vomiting may occur or gag reflex is affected with increased risk of asphyxiation from choking on vomit

.30%

- In a trance-like state
- Unconsciousness (passed out)
- Difficulty in becoming aroused

This is equivalent to the level of surgical anesthesia.

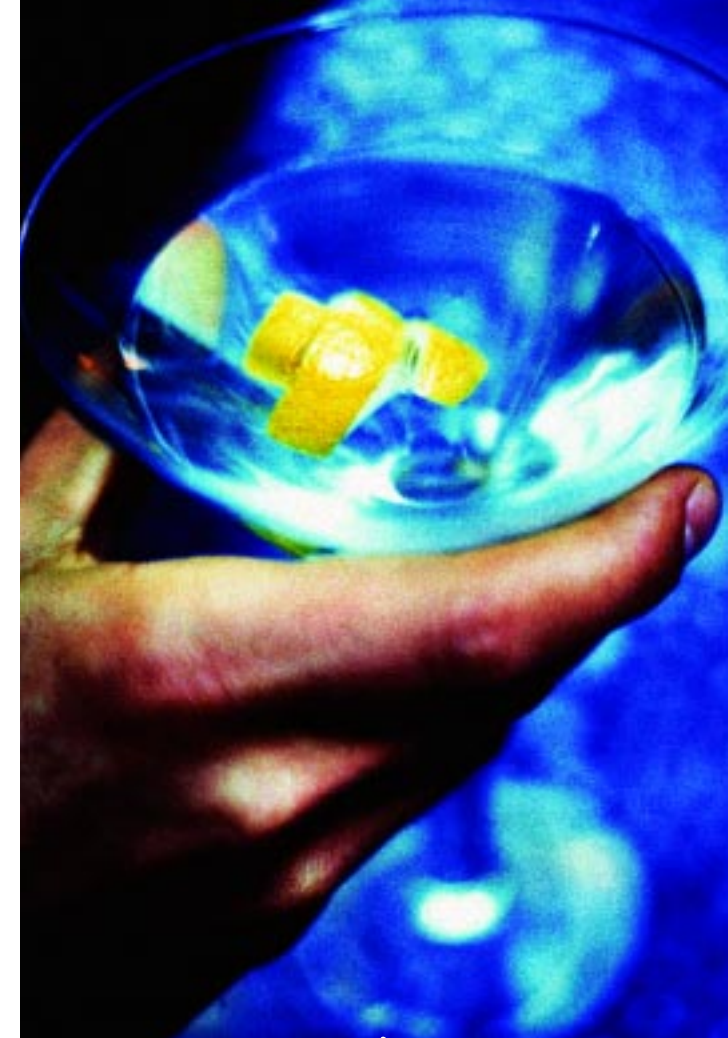
.40%

- Comatose
- Extremely high likelihood of death due to respiratory or cardiac failure



If you have any questions about the information mentioned
in this brochure, please contact Education at the Virginia
Department of Alcoholic Beverage Control, 804-213-4688.

www.abc.state.va.us
education@abc.state.va.us



JUST THE FACTS

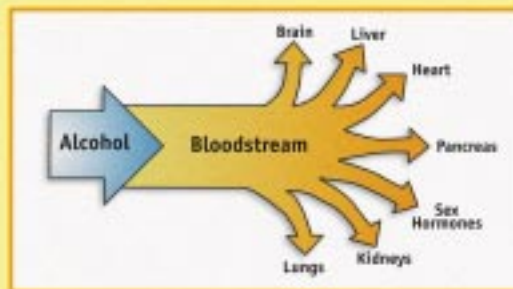
BAC

A guide to understanding
Blood Alcohol Concentration
and its effects



What is BAC?

Whether it's one drink or many drinks, alcohol can affect different people in different ways. The way a person reacts to alcohol depends on many factors, including gender, weight, rate of alcohol intake and mood. All of these factors influence the person's **blood alcohol concentration** or **BAC**. BAC is the amount of alcohol that is present in the bloodstream. For example, having a BAC of 0.10% means that a person has 1 part alcohol per 1,000 parts blood present in the body. At certain BAC levels, alcohol has been shown to alter a person's visual functions and perceptions, affect his or her ability to react, concentrate or pay attention, process information and operate a vehicle. The measurement of BAC is important for determining the role alcohol plays in car crashes, physical injuries, fires, crimes, family violence, suicides and other forms of intentional and unintentional injury.



Absorption Rate Factors

- ✓ **Strength of drink:** Drinks can have different effects based on their composition. Mixing a drink with a carbonated soda, for example, will quicken the effects of the alcohol due to the carbonation bubbles. Mixing alcohol with juice or milk, however, will decrease the effects of alcohol.
- ✓ **Rate of consumption:** Gulping or chugging drinks will increase the amount of alcohol absorbed into the system. The liver metabolizes alcohol at an average rate of one drink per hour (12 oz. beer, 5 oz. wine, 1 oz. distilled spirits). If a person drinks faster than this, the remainder of the alcohol will circulate in the bloodstream until the liver is able to metabolize all of the alcohol.
- ✓ **Body size/weight:** Smaller people will generally be affected more quickly by alcohol than heavier people. This is because heavier people have more blood and water in their bodies, which assists in the dilution of alcohol.
- ✓ **Food:** A full stomach slows the absorption of alcohol into the bloodstream. Drinking on an empty stomach, however, will cause the BAC to rise more rapidly since there is no food to assist in absorption.
- ✓ **Gender:** Women tend to reach a higher BAC faster because they have a higher fat to muscle ratio than men. Fat repels alcohol, whereas muscle absorbs it. Therefore, it takes lesser amounts of alcohol for a woman to show signs of its effects since women are usually smaller, and have less muscle to absorb the alcohol.
- ✓ **Drug use:** The use of other legal or illegal drugs can increase the effects of alcohol, and may cause a risky, unpredictable outcome.



Do You Know How Much You Are Drinking?

Remember, one oz. of distilled spirits, one 5 oz. glass of wine, and one 12 oz. beer all contain the same amount of alcohol. However, at restaurants and bars, sometimes drinks are not measured when they are poured, making it difficult to determine the amount of alcohol present. Also, some drinks call for more than one type of liquor. For example, a Long Island Iced Tea includes shots of alcohol that could equal up to three drinks! Another consideration in determining the strength of a drink is a measurement called **proof**. Proof expresses the amount of alcohol as twice the percent. For example, a drink with 80-proof liquor would contain 40% PURE alcohol.

How is BAC Obtained?

BAC can be measured by breath or blood tests. Breathalyzers are the primary method used by law enforcement agencies. Failure to comply with either of these tests can result in a loss of one's driver's license for 12 months.



Laying Down Virginia Laws

- The Commonwealth of Virginia defines the legal limit for driving while intoxicated at a BAC of 0.08% for those 21 years of age and over, and 0.02% for those who are under 21 years of age. **If convicted, violators of the above are guilty of a Class 1 Misdemeanor, can face fines ranging from \$200-2,500, the loss of one's driver's license and various jail times according to any prior convictions and the BAC measured at that time. Convictions of three or more DUIs will result in a Class 6 felony.**
- Virginia's **Zero Tolerance Law** makes driving under the influence of any amount of alcohol a serious criminal offense for drivers under the age of 21.
- The public most commonly associates BAC with drunk driving. However, it is more accurate to refer to drunk driving as alcohol-impaired driving. One does not have to be drunk (intoxicated) to be impaired. Impairment can begin with the first drink. Driving skills and abilities, such as judgment, reaction time and motor coordination, are impaired in most people long before they exhibit visible signs of drunkenness.